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Coordinate relaxation methods for multivalued complementarity problems

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Abstract

Methods of the Jacobi and Gauss-Seidel type with underrelaxation and a combined method of the splitting type are proposed for complementarity problems with multivalued mappings. The convergence of these methods to the solution is proved under the conditions that the basic mapping is upper off-diagonal antitone and the feasible set is nonempty. The numerical results obtained for test examples are presented. © 2009 Pleiades Publishing, Ltd.

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Keywords

Complementarity problem, Coordinate descent, Multivalued mapping, Off-diagonal antitonicity, Underrelaxation methods